

Jet/medium interactions at large scales

P. Bordas, V. Bosch-Ramon, M. Perucho

(Submitted on 13 Jul 2011)

High energy emission can be produced in the interaction sites of both galactic and extragalactic jets with the surrounding medium. We have developed a radiative model that accounts for the continuous injection of relativistic electrons in the forward, reverse and recollimation shocks developed in the shell, cocoon and reconfinement interaction regions, respectively. We also performed hydrodynamical simulations to establish the physical properties in both galactic and extragalactic systems. The resulting non-thermal emission is studied assuming different values for the jet power, the external mass density and the source age for both FR I galaxies and galactic microquasars. The obtained fluxes are compared to current instrument sensitivities at radio, X-ray and gamma-ray bands.

Comments: Proceedings of the 8th INTEGRAL Workshop: The Restless Gamma-ray Universe 2010

Subjects: **High Energy Astrophysical Phenomena (astro-ph.HE)**; Cosmology and Extragalactic Astrophysics (astro-ph.CO)

Cite as: **arXiv:1107.2601 [astro-ph.HE]**
(or **arXiv:1107.2601v1 [astro-ph.HE]** for this version)

Submission history

From: Pol Bordas [[view email](#)]

[v1] Wed, 13 Jul 2011 17:06:34 GMT (668kb)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

astro-ph.HE

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[astro-ph](#)

[astro-ph.CO](#)

References & Citations:

- [INSPIRE HEP](#)
([refers to](#) | [cited by](#))
- [NASA ADS](#)

Bookmark ([what is this?](#))

